

DaimlerChrysler AG

Patent claims

- 5    1.    A method for producing a double-chamber hollow profile, the walls of the chambers being integrally joined to one another, **characterized in that** a tubular hollow profile blank (1) having a single hollow space (3) is used, that the blank (1) is bent to form two  
10 branches (5, 6, 23, 26), which run at least virtually parallel to one another, and that the blank (1) thus bent is inserted into a internal high pressure forming tool and is expanded into a final shape of the hollow profile (2, 30) by means of a high internal fluid  
15 pressure until the opposing walls (9, 10, 27, 28) of the branches (5, 6, 23, 26) bear against one another and the remaining walls (14, 15) bear against the recess cavity of the forming tool.
- 20    2.    The method as claimed in claim 1, **characterized in that** the hollow profile blank (1) is bent about a transverse axis (4) to its longitudinal extent.
- 25    3.    The method as claimed in either of claims 1 or 2, **characterized in that** in bending an elongate body (20) is enveloped by the two branches (5, 6) of the hollow profile blank (1).
- 30    4.    The method as claimed in claim 1, **characterized in that** the hollow profile blank (1) is bent by one end (7) about an axis (22) at 45° to its longitudinal extent and is bent back by the other end (13) about an axis (25) mirror symmetrical with this axis (22), the opposing walls (27, 28) of the branches (23, 26) of the  
35 hollow profile blank (1) thereby produced running along the central transverse axis (29) of the blank (1).

5. The method as claimed in any one of claims 1 to 4, **characterized in that** the hollow profile blank (1) is filled with a liquid or solid medium prior to the bending operation.

5

6. The method as claimed in any one of Claims 1 to 5, **characterized in that** the two opposing walls (9, 10, 27, 28) of the two branches (5, 6, 23, 26) are coated with an adhesive or a solder prior to the internal high pressure forming.

7. The method as claimed in any one of claims 1 to 6, **characterized in that** at least one of the two branches (5, 6, 23, 26) is impressed on the wall (9, 10, 23, 26) opposed to the other branch (5, 6, 23, 26), forming one or more interlocking elements (18) and that at a corresponding point opposite these mating interlocking elements (19) are formed on the opposing wall (9, 10, 23, 26) of the other branch (5, 6, 23, 26).

8. The method as claimed in any one of claims 1 to 7, **characterized in that** the two branches (5, 6, 23, 26) are preferably perforated on the walls (15) remote from one another during the internal high pressure forming, and that the opposing walls (9, 10, 23, 26) of the two branches (5, 6, 23, 26) are then clinched by means of a male die fed through the respective hole (16) and a female die likewise fed through the respective hole (16) on the other branch (5, 6, 23, 26).